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| 09/883,899 | 06/18/2001 | Reiko Kondo | 0941.65628 | 2563 |

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| EXAMINER | |
|---|---|
| KLIMOWICZ, WILLIAM JOSEPH | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2652 | |

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/883,899 | KONDO ET AL. | |
| | Examiner | Art Unit | |
| | William J. Klimowicz | 2652 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *23 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,2 and 4-10* is/are pending in the application.

4a) Of the above claim(s) *9 and 10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Status*

Claims 1, 2 and 4-10 are currently pending.

Claim 3 has been cancelled by the Applicants in an amendment filed December 4, 2003.

### *Election/Restriction*

Applicants' election with traverse of Species I (claims 1, 2, 4-8) and Sub-species A (FIG. 11A) in the reply filed on August 23, 2004 is acknowledged. The traversal is on the ground(s) that:

> The basis for traversal is that the non-elected claims have already been examined, so further examination would not place an undue burden on the Examiner. The examination of the non-elected claims significantly overlap with the examination of the elected claims in any event, which is another basis for traversal.

See page 5 of the Response filed August 23, 2004.

This is not found persuasive because the Examiner maintains that the claims have been *substantively* amended (see Amendment C filed June 7, 2004), and based on such substantive amendments, there would indeed be a serious burden placed upon the Examiner in performing the search for the multiple inventions and species/subspecies as a collective whole.

Moreover still as set forth in 37 CFR 1.142(a), second sentence:

> [i]f the distinctness and independence of the invention be clear, such requirement will be made before any action upon the merits; however, ***it may be made at any time before final action in the case at the discretion of the examiner***." This means the examiner should make a proper requirement as early

as possible in the prosecution, in the first action if possible, otherwise, as soon as the need for a proper requirement develops.

Emphasis in bold italics added.

Additionally, it is noted that the Applicants did not traverse on the ground that the species/subspecies are not patentably distinct. If the Applicants were to traverse on the ground that the species/subspecies are not patentably distinct, the Applicants should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. If the Applicants were to include such a statement, the election requirement would be withdrawn. In either instance, however, if the Examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. § 103 of the other invention.

The requirement is still deemed proper and is therefore made FINAL.

This application contains claims 9 and 10 drawn to an invention nonelected with traverse in the Response filed August 23, 2004. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

It is noted that the Applicants contend that merely claim 4 reads on the elected embodiment. The Examiner maintains that pending claims 1, 2 and 4-8 read on the elected embodiment, and are thus examined on the merits, *infra*.

Claims 9 and 10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicants timely traversed the restriction (election) requirement in the reply filed on

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lederman et al. (JP 10-11721 A) in view of Lee et al (US 6,223,420 A1) .

As per claim 1, Lederman et al. (JP 10-11721 A) discloses a conventional magnetic head used in a magnetic reproducing device, including a magnetoresistance film (e.g., 11); a flux guide (e.g., 15) guiding a signal magnetic field (in association with another flux guide (14)) from a magnetic recording medium to said magnetoresistance film (11), wherein a part (e.g., "upper part" facing (15)) of a surface of the magnetoresistance film (11) overlaps a part ('lower part" of (15) facing (11)) of a surface of the flux guide (15), and wherein the surface of the magnetoresistive film (11) is not an edge of the magnetoresistance film (11) and the surface of the flux guide (15) is not an edge of the flux guide (15).

Additionally, as per claim 2, wherein said flux guide (15) is formed as a separate element from said magnetoresistance film (11).

Additionally, as per claim 7, wherein said magnetoresistance film (11) is a magnetoresistance film of one of a spin-valve type (i.e., GMR which is in fact a spin-valve type) and a tunnel junction type (e.g. see, inter alia, abstract).

As per claim 1, however, Lederman et al. (JP 10-11721 A) does not expressly discloses a flux-guide regulating film aligning magnetic domains of said flux guide into a single magnetic domain.

Lee et al (US 6,223,420 A1), however, discloses a magnetic head and a magnetic reproducing device (e.g., FIGS. 9 and 10 in conjunction with COL. 7, lines 58 *et seq.* and/or alternatively, the embodiment, e.g. including FIG. 13) comprising: a magnetoresistance film (e.g., 218); a flux guide (208) formed so as to overlap said magnetoresistance film (202) (e.g., due to at least a taper overlapping at (220)), said flux guide (208) being out of plane with said magnetoresistance film (1) - see FIG. 10, the flux guide (208) guiding a signal magnetic field from a magnetic recording medium (at (218) to said magnetoresistance film (202), see COL. 7, lines 58 *et seq.*; and a flux-guide regulating film (204/206) aligning magnetic domains of said flux guide (208) into a single magnetic domain (e.g. see inter alia, COL. 7, line 66 through COL. 8, line 13).

Additionally, as per claim 2, wherein said flux guide (208) is formed as a separate element from said magnetoresistance film (202) -FIG. 10.

As per claim 4, wherein at least one of sides and surfaces of said flux-guide regulating film (204/206) is magnetically connected with said flux guide (208) - FIG. 9.

As per claim 5, said flux-guide regulating film (24/25) is one of a highly coercive-force film and an antiferromagnetic film (e.g. see *inter alia*, COL. 7, line 67 through COL. 8, line 2).

As per claim 6, wherein said flux-guide regulating film (204/206) also aligns magnetic domains of said magnetoresistance film (202) into a single magnetic domain (e.g., see *inter alia*, COL. 7, line 66 through COL. 8, line 13).

As per claim 7, wherein said magnetoresistance film (202) is a magnetoresistance film of one of a spin-valve type and a tunnel junction type (e.g. see, *inter alia*, COL. 5, lines 65-67).

Additionally, as per claim 8, Lee et al (US 6,223,420 B1) discloses a magnetic reproducing device (e.g., FIGS. 1 and 2) comprising: a magnetic head (e.g. 42) including the aforementioned magnetoresistance film (202) and flux guide (208).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the flux-guide regulating film, as expressly taught by Lee et al (US 6,223,420 A1), to the magnetic head flux-guide MR system of Lederman et al. (JP 10-11721 A).

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the flux-guide regulating film, as expressly taught by Lee et al (US 6,223,420 A1), to the magnetic head flux-guide MR system of Lederman et al. (JP 10-11721 A) in order for "stabilizing end regions of each of the read sensor and the one or more flux guides ... so that upon the instance of flux incursions of the absence thereof from a rotating disk the end regions remain in the single domain state as contrasted to shifting domains which cause Barkhausen noise." See COL. 8, line 1 through line 10 of Lee et al (US 6,223,420 A1).

### *Response to Arguments*

Applicants' arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (703) 305-3452. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

William J. Klimowicz
Primary Examiner
Art Unit 2652

WJK